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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,143	08/23/2001	Franco Ambrosoli	163-344	1756

7590

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EXAMINER

SAADAT, CAMERON

ART UNIT

PAPER NUMBER

3713

DATE MAILED: 12/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/914,143

Applicant(s)

AMBROSOLI, FRANCO

Examiner

Cameron Saadat

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/23/01.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim language is indefinite, and appears to be a literal translation into English from Italy document and is replete with grammatical and idiomatic errors. Furthermore, in claim 1, the term "and/or" provides alternative choices and thereby renders the claim indefinite.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. **Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerber (U.S. Patent No. 5,788,500) in view of Lebensfeld et al. (U.S. Patent No. 6,302,796), further in view of Dyer et al. (U.S. Patent No. 4,653,760).**

Regarding claim 1, Gerber discloses equipment for detecting that a target has received a direct hit from a simulated weapon 110, including a weapon and a target (column 2, lines 33-37); said weapon providing an emitter of signals or laser shots operated by a switch and a trigger; said target including sensors affixed to a supporting element; said sensors being operatively connected to an electronic detection circuit (column 5, lines 38-44); said supporting elements being worn by a user; said emitter of signals or laser shots being situated on the barrel of a pistol or rifle (see Fig. 11, ref 4), said equipment comprising a control device or control electronic circuit characterized in that: said control device is a microcontroller 44 with a power supply (see Fig. 18); a direct hit indicator (column 10, line 64). Although Gerber does not specify the type of microcontroller, the examiner takes official notice that RISC is a notoriously old and well known microcontroller architecture that is considered favorable for its speed.

Gerber further teaches a signaler for indicating equipment status (column 10, lines 60-61), but does not expressly disclose that the signaler is for indicating whether the weapon is unloaded. However, Lebensfeld et al. discloses equipment for detecting that a target has received a direct hit from a simulated weapon wherein an indicator notifies the user that the weapon is unloaded (column 10, line 8). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the weapon described by Gerber, by providing an indicator to notify the user that the weapon is empty, in light of the teachings of

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Lebensfeld et al. The motivation for doing so would have been to provide a more realistic simulation of a real weapon.

In addition, Gerber discloses a signaler for notifying a user that the weapon will not fire due to low battery (column 8, lines 27-31). Neither Gerber nor Lebensfeld et al. explicitly disclose a signaler for detecting the presence of magazines connected to the microcontroller of the weapon. However, Dyer et al. discloses equipment for detecting that a target has received a direct hit from a simulated weapon wherein the user will be signaled that a magazine is not present since the weapon will not operate if magazine 22 is not inserted into the weapon. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the weapon described by Gerber, by signaling a user that the weapon does not function if a magazine is not present, in light of the teachings of Lebensfeld et al. The motivation for doing so would have been to provide a more realistic simulation of a real weapon.

Regarding claim 2, Gerber discloses equipment characterized in that the sensors are laser sensors, but does not explicitly disclosed that the sensors are photovoltaic sensors. However, it is the examiner's position that it would have been an obvious matter of choice well within the capabilities of one skilled in the art to use photovoltaic sensors. Furthermore these photo sensors are analogous and thereby provide no criticality with respect to the invention.

Regarding claim 3, Gerber discloses equipment characterized in that the supporting elements are a jacket and a helmet (see Fig. 23A, refs. 40 and 92).

Regarding claim 4, Gerber discloses equipment characterized in that the supporting element is a target (column 2, lines 33-37).

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Regarding claims 5 and 6, Gerber discloses equipment characterized in that the weapon (as per claim 5) is a pistol, and (as per claim 6), a rifle (column 2, lines 26-29).

Regarding claim 7, Gerber discloses equipment characterized in that the sensors are provided with amplification and a filtering chain to eliminate random components from the signal to make the signal compatible with the microcontroller (see Fig. 18, refs. 42, 43, 44).

Regarding claim 8, Gerber discloses equipment characterized in that the filtering chain filters out extraneous signals and noise and provides amplification (column 10, lines 4-6). It is not explicitly disclosed the filter comprises an attenuator circuit. However, the examiner takes official notice that the use of attenuator circuits including low-pass filters and Schmitt trigger circuits are notoriously old and well known in the art for filtering out extraneous signals and noise.

Regarding claim 9, Gerber discloses equipment characterized in that the microcontroller is connected to a generator of differentiated sound effects (column 11, lines 8-12).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Kounoe et al. (U.S. Patent No. 5,577,962) discloses a simulated weapon wherein a sensor detects the presence of a magazine.
- Marshall et al. (U.S. Patent NO. 5,194,007) discloses a simulated weapon wherein an external switch is provided.
- Newton's Telecom Dictionary – teaches that RISC technology is old and well known.


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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cameron Saadat whose telephone number is 703-305-5490. The examiner can normally be reached on M-F 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Valencia Martin Wallace can be reached on 703-308-4119. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

CS
December 2, 2002


S. THOMAS HUGHES
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700